

**AMENDMENTS TO THE SPECIFICATION:**

*Please amend the paragraphs beginning at page 1, line 9, through page 2, line 24, as follows:*

~~Now a~~ A liquid crystal display device nowadays has characteristics such as small size, thinness, low power consumption, and light weight, and is widely used in various kinds of electronic devices. Particularly, an active matrix type liquid crystal display device (liquid crystal panel) having a switching element as an active element can realize the same display property as in a CRT, so that this is widely applied to an OA device such as a personal computer, an AV device such as a television, a ~~cellar~~ cellular phone, and the like. Further, recently, the liquid crystal display device has been being made larger, and finer, and its quality (such as an effective pixel area ratio (aperture ratio)) has been being improved rapidly.

In ~~such a~~ technique ~~that wherein~~ a pixel electrode and a source line (signal line) are formed in the same surface of an active matrix substrate, a distance between the pixel and a source bus line (hereinafter, referred to simply as a source line) is shortened and the source line is made finer so as to increase the effective pixel area, thereby making the device finer and improving the aperture ratio.

However, when the distance between the pixel and the source line is shortened, a short circuit tends to occur. Further, when the source line is made finer, connection failure tends to occur. ~~That is, in~~ In such a technique ~~that wherein~~ a pixel electrode and a source line are formed in the same surface of an active matrix substrate, the tendency to short circuiting and the connection failure cause decrease production yield thereof to drop.

~~Then, in order to~~ To prevent the short circuiting and the connection failure, ~~so that the and resultant production yield does not drop, there are proposed the following~~ methods (a) to (c) of manufacturing the active matrix substrate have been proposed.



*Please amend the paragraph beginning at page 3, line 8, as follows:*

Further, a color filter substrate is combined with the active matrix substrate manufactured in the foregoing manner so that the color filter substrate faces the active matrix substrate, and liquid crystal is injected into a gap between both the substrates, thereby obtaining the liquid crystal display device. ~~Here, An example of the~~ color filter substrate includes a color substrate having areas of R (red), G (green), and B (blue), so that these areas correspond to pixel areas on the side of the active matrix substrate wherein a black matrix (light shielding film) is provided on an area other than the pixel areas.

*Please amend the paragraph beginning at page 5, line 10, as follows:*

~~Next, the~~ The following description will briefly explain a method of manufacturing the active matrix substrate, particularly a method of manufacturing a thin film transistor array, with reference to Fig. 12 and Fig. 13. Note that, Fig. 13 is a cross sectional view taken along A-A' line of the thin film transistor array shown in Fig. 12.

*Please amend the paragraph beginning at page 7, line 20, through page 8, line 4, as follows:*

The z1 represents where an end of the source line 102 is positioned, and is a line which extends from the end of the source line 102 in perpendicular to a surface of the source line 102. Likewise, the z1' represents where an end of the source line 102 is positioned, and is a line which extends from the end of the source line 102 in perpendicular to a surface of the source line 102. Z1 is an end close to a pixel electrode (103') adjacent to a target pixel. ~~Note that the~~ The z1' is an end close to a pixel electrode (103) of the target pixel.



*Please amend the caption on page 9, line 3, as follows:*

BRIEF SUMMARY OF THE INVENTION

*Please amend the paragraph beginning at page 9, line 8, as follows:*

In order to achieve the foregoing object, the display device substrate ~~according to the present invention~~ includes: one or more pixel electrodes each of which is provided on each intersection of a signal line and a scanning line that are provided on an insulating substrate; and an interlayer insulating film stacked between the signal line and the pixel electrode, wherein in view of a vertical direction with respect to a surface of the insulating substrate, the signal line is provided on an area on which the pixel electrode is not provided, and a gap is provided between the signal line and the pixel electrode.

*Please amend the paragraph beginning at page 10, line 8, through page 11, line 1, as follows:*

According to the arrangement, the display device substrate provided in the liquid crystal display device ~~of the present invention~~ is such that: in view of a vertical direction with respect to a surface of the insulating substrate, the signal line is provided on an area on which the pixel electrode is not provided, and a gap is provided between the signal line and the pixel electrode. In this manner, a gap is provided between the signal line and the pixel electrode, so that a value ( $\Delta\Delta\beta$ ) interrelated with display unevenness of the display device is reduced. When  $\Delta\Delta\beta$  is reduced, difference in a pixel potential effective value ( $V_d$ ) is reduced. Thus, according to the arrangement, it is possible to provide a liquid crystal display device which can reduce the display unevenness of the display device.



For a fuller understanding of the nature and advantages of the invention, reference should be made to the ensuing detailed description taken in conjunction with the accompanying drawings.

*Please amend the paragraph beginning at page 11, line 3, as follows:*

Fig. 1 is a cross sectional view showing an example embodiment of a liquid crystal display device of the present invention.

*Please amend the paragraph beginning at page 11, line 10, as follows:*

Fig. 4 is a cross sectional view showing another example embodiment of the display device substrate of the present invention.

*Please amend the paragraphs beginning at page 11, line 16, through page 12, line 3, as follows:*

Fig. 6 is a simple equivalent circuit diagram showing an example active matrix type liquid crystal display device of an Example of the present invention.

Fig. 7 is a schematic, showing a relationship between a pixel and a source line, which is used as an example to illustrate a relationship between  $\Delta\Delta\beta$  and  $V_d$  difference in Example of the present invention.

Fig. 8 is a schematic, showing various kinds of waveforms in DOT reversal driving performed at a horizontal 2H cycle, which is used as an example to illustrate an approximate expression of  $V_d$  in Example of the present invention.

*Please amend the paragraphs beginning at page 12, line 18, through page 13, line 16, as follows:*



~~Note that, the~~ The present embodiment will explain an active matrix substrate for a liquid crystal display device as a specific example of the display device substrate.

Fig. 1 is a cross sectional view showing an example embodiment of the liquid crystal display device ~~of the present invention~~. A liquid crystal display device 40 includes an active matrix substrate 30 and a counter substrate 33, and a liquid crystal layer 32 is sandwiched by these substrates. ~~Note that the liquid~~ Liquid crystal layer 32 is sandwiched by an alignment film of the counter substrate 33 and an alignment film 31 of the active matrix substrate 30.

Fig. 2 is a plan view showing (i) a single pixel in the active matrix substrate 30 (display device substrate) of the present invention and (ii) a part of a pixel adjacent to the single pixel. As shown in Fig. 2, a source line (signal line) 2, a gate line (scanning line) 1, and a pixel electrode 3 are stacked above an insulating substrate 10. The gate line 1 and the source line 2 are disposed so as to cross each other. Further, the pixel electrode 3 is disposed in each intersection where the gate line 1 and the source line 2 cross each other. ~~Note that the~~ The insulating substrate 10 is positioned on the backmost side in Fig. 2, and is positioned as shown in the cross sectional view of Fig. 3.

*Please amend the paragraph beginning at page 15, line 3, as follows:*

~~Note that~~As used herein, “in view of a vertical direction with respect to the surface of the insulating substrate 10” means that “in view of an orthogonal projection of a target object disposed on the surface of the insulating substrate 10”. More specifically, the “view” is obtained by linking ends of lines which are perpendicularly extended from a target object to the surface of the insulating substrate 10”.



*Please amend the paragraphs beginning at page 16, line 3 through line 17, as follows:*

~~Next, how~~ How a current and a voltage are controlled will be briefly explained. When the gate line 1 is selected, a voltage is applied to the gate electrode 4. The voltage applied to the gate electrode 4 controls a current flowing between the source electrode 5 and the drain electrode 6. That is, a current flows from the source electrode 5 via the drain electrode 6 to the pixel electrode 3 on the basis of a signal transmitted from the source line 2, so that the pixel electrode 3 makes a predetermined display. The auxiliary capacitor line 7 is subsidiarily provided so as to maintain the predetermined display.

~~Next, a~~ A process of manufacturing the active matrix substrate 30 is next explained as follows with reference to Fig. 2 and Fig. 3. ~~Note that, Fig. 3 is a cross sectional view taken along B-B' shown in Fig. 2.~~

*Please amend the paragraph beginning at page 17, line 2, as follows:*

~~Note that, the~~ The active element 14 shown in Fig. 2 ~~adand~~ and Fig. 3 is formed as follows. First, an active semiconductor layer 12 is formed. Next, an amorphous silicon (for example, an n-type amorphous silicon) layer 13 is formed. Further, the source line 2, the source electrode 5, and the drain electrode 6 are formed (the source line 2 and the source electrode 5 are formed in accordance with the same process).

*Please amend the paragraph beginning at page 17, line 18, as follows:*

A process of forming the BM 8 is as follows. First, a dry film having a black resin film is laminated on a surface of the substrate, and the black resin film is transcribed by exfoliating a cover film. Next, exposure, development, and post-bake are performed by



using a pattern mask so as to cover the drain electrode 6, the source electrode 5, the active element 14, the source line 2, the gate line 1, and the auxiliary capacitor line 7, and so that the pixel electrode 3 and the pixel electrode 3' overlap with ~~each other BM 8~~ in a two-dimensional manner (overlapping portion is shown by "y" of Fig. 3), thereby forming the BM 8 (BM pattern). ~~Note that, as As~~ shown in Fig. 2 and Fig. 3, the BM 8 is not formed on the contact holes 9 and 9' and peripheral portions thereof.

*Please amend the paragraph beginning at page 18, line 20, as follows:*

Next, there is formed the contact hole 9<sub>a</sub> which connects (i) the drain electrode 6 of the active element 14 and (ii) the pixel electrode 3 to each other, and there is formed the contact hole 9' which connects the auxiliary capacitor line 7 for generating auxiliary capacitance to the pixel electrode 3. Thereafter, a transparent pixel electrode is formed so as to coat the contact holes 9 and 9'. Next, patterning is performed with respect to the transparent pixel electrode so as to provide a two-dimensional distance x away from the source line 2, thereby obtaining the pixel electrodes 3 and 3'.

*Please amend the paragraph beginning at page 21, line 17, as follows:*

That is, it may be so arranged that: the BM 8 covers at least the surface of the source line 2 among the drain electrode 6, the source electrode 5, the active element 14, the source line 2, the gate line 1, and the auxiliary capacitor line 7, so that it is possible to suppress, preferably prevent light leakage. ~~Note that, it It~~ may be so arranged that the BM 8 is provided so as to cover at least the surface of the source line 2, but it is preferable to provide the BM 8 so as to cover also a surface of the active element 14, and it is more preferable to provide the BM 8 so as to cover also a surface of the gate line 1.



*Please amend the paragraph beginning at page 25, line 2, as follows:*

y1 shown in Fig. 3 is a straight line which vertically extends from (i) an end of the BM 8 positioned on the side of the pixel electrode 3' (ii) to the surface of the insulating substrate 10. Fig. 3 shows that the straight line y1 crosses the pixel electrode 3'. That is, the pixel electrode 3' and the BM 8 overlap with each other. Further, a straight line y2 (same as in X1) shown in Fig. 3 is a straight line which vertically extends from the end of the pixel electrode 3' to the surface of the insulating substrate 10. Further, y is equal to a distance (shortest distance) between both the lines y1 and y2. In other ~~words~~words, y is equal to a distance between (i) a vertical plane, having the end face of the BM 8 so as to be positioned on the side of the pixel electrode 3', which is perpendicular to the surface of the insulating substrate 10 and (ii) a vertical plane, having the end face of the pixel electrode 3' (an end face positioned on the side of the source line, that is, positioned opposite to the end face of the pixel electrode 3), which is perpendicular to the surface of the insulating substrate 10. That is, y represents the width of the overlapping portion in which the BM 8 of a certain pixel overlaps with the pixel electrode 3' adjacent to the pixel.

*Please amend the paragraphs beginning at page 26, line 25, through page 29, line 1, as follows:*

Further, in the present embodiment, the BM 8 is provided on the side of the active matrix substrate 30 so as to improve the aperture ratio. However, it is also possible to provide the BM 8 on the counter substrate 33 positioned opposite to the active matrix substrate with the liquid crystal layer 32 therebetween. The BM 8 is provided on the active matrix substrate 30, so that it is possible to improve the display unevenness caused by the uneven parasitic capacitor (Csd) in the display area, thereby improving the yield.

~~Note that, the~~ The BM 8 is provided on the side of the active matrix substrate 30, so that



it is possible to improve the display unevenness and the yield, and it is possible to improve the aperture ratio as described above. ~~Note that, either~~ Either of the substrates may have the BM 8, or it may be so arranged that the one substrate has the BM 8 and also the other substrate opposite to the one substrate has the BM 8.

Further, the present embodiment explains mainly an arrangement in which the BM 8 is provided on the active matrix substrate 30, but the display device substrate according to the present invention is not limited to this. The pixel electrode is provided on a surface different from a surface having the signal line, and in view of a vertical direction with respect to the surface of the insulating substrate, the signal line is provided on an area having no pixel electrode, and a gap is provided between the signal line and the pixel electrode. As long as the display device substrate is arranged in this manner, it may be so arranged that the BM is not provided. That is, ~~according to the present invention~~ in view of a vertical direction with respect to the surface of the insulating substrate, a gap is provided between the signal line and the pixel electrode, so that a value ( $\Delta\Delta\beta$ ) interrelated with the display unevenness becomes small, thereby reducing difference in a pixel potential effective value ( $V_d$ ). As a result, it is possible to reduce the display unevenness of the display device.

It is general that the liquid crystal display device displays a predetermined image by controlling the liquid crystal in accordance with a signal (voltage) applied to a pixel electrode. Thus, a voltage is not applied to an area having no pixel electrode, specifically, a voltage is not applied to a liquid crystal layer positioned in a gap between the signal line and the pixel electrode in view of a vertical direction with respect to a surface of an insulating substrate, so that it is sometimes difficult to control in a desired manner. Thus, in a display device of a normally white mode which causes light to be transmitted when a voltage is not applied and causes light to be shielded when a voltage is applied, there is a possibility that: when the pixel displays a black state, a white state occurs between the pixel electrode and the signal line, so that the contrast of the display image drops.



*Please amend the paragraphs beginning at page 30, line 9, as follows:*

~~Note that, in~~ In the case where the display device substrate having the light shielding film according to the present embodiment is used in a display of a normally black mode, when the pixel displays a black state, a black portion, positioned in the gap, whose response speed is slow, is hidden by the light shielding film, so that it is possible to increase the response speed at which the writing is performed by the display device.

~~Note that, as~~ As to the display device according to the present embodiment, it is possible to optimize the display device so as to correspond to the aforementioned modes (normally white mode, normally black mode) by using ordinary means, for example, by determining (i) a direction of a polarizing plate and (ii) a liquid crystal material, or in the similar manner.

*Please amend the paragraphs beginning at page 31, line 6, through line 21, as follows:*

The following description will explain one embodiment of the present invention with reference to Fig. 2 to Fig. 4. ~~Note that, for~~ For convenience in the description, the same reference signs are given to the members having the same functions as the members shown in drawings of Embodiment 1, and description thereof is omitted. Further, various characteristics described in Embodiment 1 can be combined with characteristics described in the present embodiment.

Embodiment 2 describes the active matrix substrate 30, having a stacking body constituted of a two-or-more-layered interlayer insulating film, with reference to Fig. 2 and Fig. 4. ~~Note that, the~~ The plan view (Fig. 2) illustrates the same arrangement as in Embodiment 1. Fig. 4 is a cross sectional view taken along B-B' line shown in Fig. 2.



*Please amend the paragraph beginning at page 32, line 9, as follows:*

~~Note that, the~~ The active element 14 shown in Fig. 2 and Fig. 4 is formed as follows. First, the active semiconductor layer 12 is formed. Next, the amorphous silicon (for example, an n-type amorphous silicon) layer 13 is formed. Further, the source line 2, the source electrode 5, and the drain electrode 6 are formed (the source line 2 and the source electrode 5 are formed in accordance with the same process).

*Please amend the paragraph beginning at page 33, line 1, as follows:*

Next, the BM 8 is formed. in the present embodiment, tantalum (Ta) is used as the material for the BM 8. Specifically, first, a Ta film is formed by using a sputtering device. Next, patterning is performed with respect to the Ta film so as to cover the active element 14, the source line 2, the gate line 1, and the auxiliary capacitor line 7, and so as to overlap with the pixel electrodes 3 and 3' in a two-dimensional manner, thereby obtaining the BM 8. ~~Note that, the~~ The patterning is photolithograph patterning performed by using a pattern mask. ~~Note that, as~~ As shown in Fig. 2 and Fig. 4, the BM 8 is not formed on the contact holes 9 and 9' and peripheral portions thereof.

*Please amend the paragraph beginning at page 35, line 14, as follows:*

~~Note that, also in~~ In the present embodiment, as in Embodiment 1, it is desirable to set the value of x and x' that are shown in Fig. 4 so that: its lower limit is preferably 1 $\mu$ m, more preferably 5 $\mu$ m, still more preferably 10 $\mu$ m, particularly preferably 15 $\mu$ m, and its upper limit is preferably 20 $\mu$ m, more preferably within a range of 15 $\mu$ m. It is desirable to set y, which represents the width of the overlapping portion in which the BM 8 of a certain pixel overlaps with the pixel electrode 3' adjacent to the pixel, to be within a range of from not less than 0.6 $\mu$ m to not more than 5 $\mu$ m.



*Please amend the paragraph beginning at page 36, line 8, through page 37, line 19, as follows:*

As described above, the display device substrate ~~of the present invention~~ includes: one or more pixel electrodes each of which is provided on each intersection of a signal line and a scanning line that are provided on an insulating substrate; and an interlayer insulating film stacked between the signal line and the pixel electrode, and in view of a vertical direction with respect to a surface of the insulating substrate, the signal line is provided on an area on which the pixel electrode is not provided, and a gap is provided between the signal line and the pixel electrode.

As described above, the display device substrate ~~of the present invention~~ is arranged so that a gap is provided between the signal line and the pixel electrode. Thus, a value ( $\Delta\Delta\beta$ ) interrelated with display unevenness of the display device is reduced. When  $\Delta\Delta\beta$  is reduced, difference in a pixel potential effective value ( $V_d$ ) is reduced. As a result, it is possible to reduce the display unevenness of the display device.

Further, the display device substrate ~~of the present invention~~ is arranged so that: in view of a vertical direction with respect to a surface of the insulating substrate, the light shielding film covers a surface of the signal line (source line) and the gap between the signal line and the pixel electrode. Thus, in addition to the foregoing effect, when the present substrate is used in a display device so that light leakage is prevented, it is possible to exhibit higher display performance.

Further, the display device substrate ~~of the present invention~~ further includes: an active element provided on each intersection of the signal line and the scanning line; a light shielding film provided so as to cover at least a surface of the signal line among the signal line, the active element, and the scanning line, wherein in view of the vertical direction with respect to the surface of the insulating substrate, a gap between the pixel electrodes which are adjacent to each other with the signal line therebetween is covered by the light shielding film.



*Please amend the paragraph beginning at page 37, line 24, as follows:*

Further, in addition, it may be so arranged that the display device substrate ~~of the present invention~~ includes: an active element provided on each intersection of the signal line and the scanning line; a light shielding film provided so as to cover at least a surface of the signal line among the signal line, the active element, and the scanning line, wherein in view of the vertical direction with respect to the surface of the insulating substrate, (i) the light shielding film which covers the surface of the signal line and (ii) the pixel electrode overlap with each other.

*Please amend the paragraph beginning at page 38, line 18, as follows:*

Further, it is also possible to arrange the display device substrate ~~of the present invention~~ so as to include: an active element provided on each intersection of the signal line and the scanning line; a contact hole for allowing the active element and the pixel electrode to be in contact with each other; and a light shielding film provided so as to cover surfaces of the active element, the signal line, and the scanning line, wherein in view of the vertical direction with respect to the surface of the insulating substrate, (i) the light shielding film which covers the surface of the signal line and (ii) the pixel electrode overlap with each other.

*Please amend the paragraph beginning at page 39, line 24, as follows:*

Further, it may be so arranged that: the display device substrate ~~of the present invention~~ further includes: an active element provided on each intersection of the signal line and the scanning line; a contact hole for allowing the active element and the pixel electrode to be in contact with each other; and a light shielding film provided so as to cover surfaces of the active element, the signal line, and the scanning line, wherein: the



interlayer insulating film is a stacking body made of two or more layers, and the light shielding film is stacked between an uppermost layer and a lowermost layer that constitute the interlayer insulating film, and in view of the vertical direction with respect to the surface of the insulating substrate, a gap between the pixel electrodes which are adjacent to each other with the signal line therebetween is covered by the light shielding film.

*Please amend the paragraph beginning at page 41, line 2, as follows:*

Further, it may be so arranged that: the display device substrate ~~of the present invention~~ further includes: an active element provided on each intersection of the signal line (source line) and the scanning line (gate line); a light shielding film provided so as to cover at least a surface of the signal line among the signal line, the active element, and the scanning line, wherein the interlayer insulating film is a stacking body made of two or more layers, and the light shielding film is stacked between an uppermost layer and a lowermost layer that constitute the interlayer insulating film, and in view of the vertical direction with respect to the surface of the insulating substrate, (i) the light shielding film which covers the surface of the signal line and (ii) the pixel electrode overlap with each other.

*Please amend the paragraph beginning at page 42, line 4, as follows:*

Further, it is also possible to arrange the display device substrate ~~of the present invention~~ so as to include: an active element provided on each intersection of the signal line (source line) and the scanning line (gate line); a contact hole for allowing the active element and the pixel electrode to be in contact with each other; and a light shielding film provided so as to cover surfaces of the active element, the signal line, and the scanning line, wherein: the interlayer insulating film is a stacking body made of two or more



layers, and the light shielding film is stacked between an uppermost layer and a lowermost layer that constitute the interlayer insulating film, and in view of the vertical direction with respect to the surface of the insulating substrate, (i) the light shielding film which covers the surface of the signal line and (ii) the pixel electrode overlap with each other.

*Please amend the paragraph beginning at page 43, line 7, as follows:*

Further, it is preferable to arrange the display device substrate ~~of the present invention~~ so that the light shielding film is made of resin having an insulating property.

*Please amend the paragraph beginning at page 43, line 17, as follows:*

Further, it is preferable to arrange the display device substrate ~~of the present invention~~ so that the light shielding film is made of metal.

*Please amend the paragraph beginning at page 43, line 22, through page 46, line 1, as follows:*

Further, as described above, the display device substrate ~~of the present invention~~ is arranged so that: when the gap is within a range of from not less than  $1\mu\text{m}$  to not more than  $20\mu\text{m}$ , the value  $\Delta\Delta\beta$  is sufficiently decreased with it saturated. Thus, the gap is set within the foregoing range, so that it is possible to prevent the aperture ratio from dropping while sufficiently improving the display unevenness of the display device.

It may be so arranged that the display device substrate ~~of the present invention~~ includes: an active element provided on each intersection of the signal line and the scanning line; a contact hole for allowing the active element and the pixel electrode to be in contact with each other; and a light shielding film which is stacked between the



uppermost layer and the lowermost layer, that constitute the interlayer insulating film, so as to cover a surface of the signal line, wherein: each of one or more contact holes is provided on the interlayer insulating film between the signal line and the metallic light shielding film, and the metallic light shielding film is connected to the signal line via the contact hole.

Further, it is possible to arrange the liquid crystal display device ~~of the present invention~~ so as to include the display device substrate of the present invention.

According to the arrangement, the display device substrate provided in the liquid crystal display device ~~of the present invention~~ is such that: in view of a vertical direction with respect to a surface of the insulating substrate, the signal line is provided on an area on which the pixel electrode is not provided, and a gap is provided between the signal line and the pixel electrode. In this manner, a gap is provided between the signal line and the pixel electrode, so that a value ( $\Delta\Delta\beta$ ) interrelated with display unevenness of the display device is reduced. When  $\Delta\Delta\beta$  is reduced, difference in a pixel potential effective value ( $V_d$ ) is reduced. Thus, according to the arrangement, it is possible to provide a liquid crystal display device which can reduce the display unevenness of the display device.

As described above, the display device substrate ~~of the present invention~~ can improve the display unevenness caused by such phenomenon that the parasitic capacitance between the pixel electrode and the signal line is uneven in the display area. The display device substrate is preferably used in a display device such as an active matrix type liquid crystal display device. For example, the display device substrate can be widely used in various kinds of electronic devices: an OA device such as a personal computer, an AV device such as a television, and a cellular phone, etc.

~~Note that, the~~ The invention may be varied in many ways within a scope of the following claims. Embodiments obtained by combining technical means disclosed in different examples and embodiments as required are included in the technical scope of the invention.



*Please amend the paragraph beginning at page 46, line 9, as follows:*

Fig. 5 shows a relationship between a  $\Delta\Delta\beta$  value interrelated with the display unevenness and a gap (distance) between the pixel electrode and the source line. Further, Fig. 8-6 is a simple equivalent circuit diagram of an active matrix type liquid crystal display device.

*Please amend the paragraph beginning at page 46, line 14, as follows:*

In Fig. 5, a vertical axis represents the  $\Delta\Delta\beta$  value, and a horizontal axis represents a value of the gap  $x$  between the pixel electrode and the source line. ~~Note that, when~~ When  $x$  is less than zero, this means that the source line and the pixel electrode overlap with each other to some extent.

*Please amend the paragraph beginning at page 47, line 17, and continuing to page 48, line 3, as follows:*

Next, taking dot reversal driving as an example, a relationship between the  $\Delta\Delta\beta$  value (%) and the display unevenness is described as follows. The pixel capacitance is  $C_{lc}$ , and the pixel auxiliary capacitance is  $C_{sc}$ , and the parasitic capacitance between the gate line and the pixel electrode is  $C_{gd}$ , and the parasitic capacitance between the source line and the pixel electrode is  $C_{sd}$ . Further, Fig. 8-6 is a simple equivalent circuit diagram showing an active matrix type liquid crystal display device. Further,  $C_{pix}$  is calculated by summing up  $C_{lc}$ ,  $C_{cs}$ ,  $C_{gd}$ , and  $C_{sd}$  ( $C_{pix} = C_{lc} + C_{cs} + C_{gd} + C_{sd}$ ). Further,  $\beta$  is set as follows:  $\beta = C_{sd}/C_{pix}$ .

*Please amend the paragraph beginning at page 48, line 15, and continuing to page 49, line 3, as follows:*



The display unevenness is caused by the difference in  $V_d$ . A relationship between the difference in  $V_d$  and the  $\Delta\Delta\beta$  is described as follows with reference to Fig. 9-7 showing a schematic of the pixel and the source line. As shown in Fig. 9-7, a source line connected to a pixel electrode of the pixel 1A via the active element is S1, and a source line connected to a pixel electrode of the pixel 2A via the active element is S2. Likewise, a source line connected to a pixel NA via the active element is S (N). Further, a source line for charging a corresponding (specific) pixel is defined as “corresponding source”. Further, a source line which has a pixel electrode and a capacitor but does not charge a corresponding (specific) pixel is defined as “noncorresponding source”.

*Please amend the paragraph beginning at page 49, line 4, and continuing to page 49, line 15, as follows:*

In Fig. 9-7, a relationship between the corresponding source and the noncorresponding source in the pixel 1A is as follows. That is, the corresponding source is S1 (corresponding source=S1), and the noncorresponding source is S2 (noncorresponding source=S2). A relationship between the corresponding source and the noncorresponding source in the pixel 2A is as follows: the corresponding source=S2, and the noncorresponding source=S3. Likewise, a relationship between the corresponding source and the noncorresponding source in the pixel NA is as follows: the corresponding source=S (N), and the noncorresponding source=S (N+1).



*Please amend the paragraph beginning at page 49, line 16, and continuing to page 49, line 24, as follows:*

Further, capacitance between the pixel electrode and the corresponding source (Csd·corresponding) is Csd 11, that is, capacitance between the pixel electrode and the noncorresponding source = Csd·corresponding = Csd 11. Further, capacitance between the pixel electrode and the noncorresponding source (Csd·noncorresponding) is Csd 12, that is, capacitance between the pixel electrode and the noncorresponding source = Csd·noncorresponding = Csd 12.